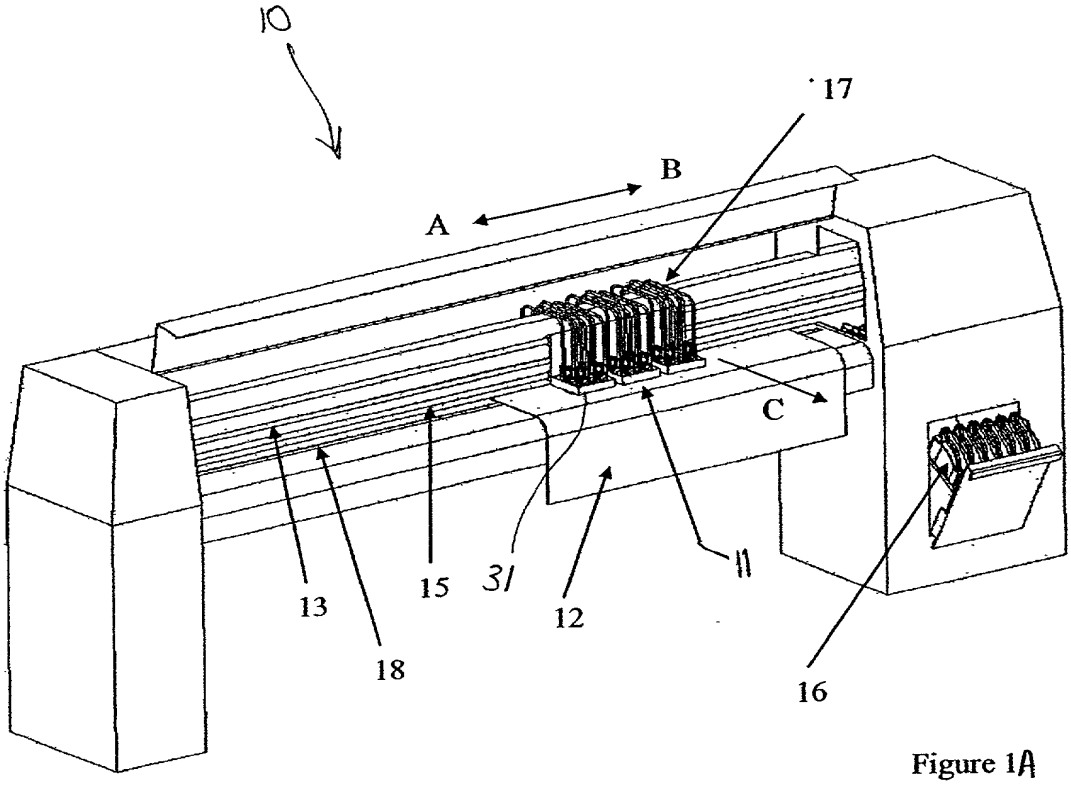


Figure 1A

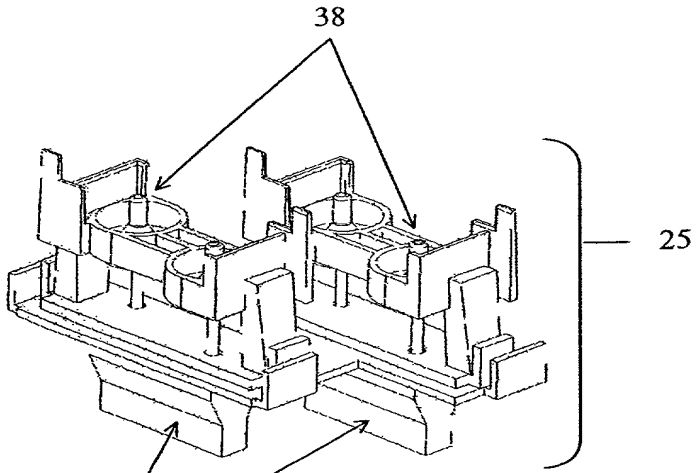


Figure 1B

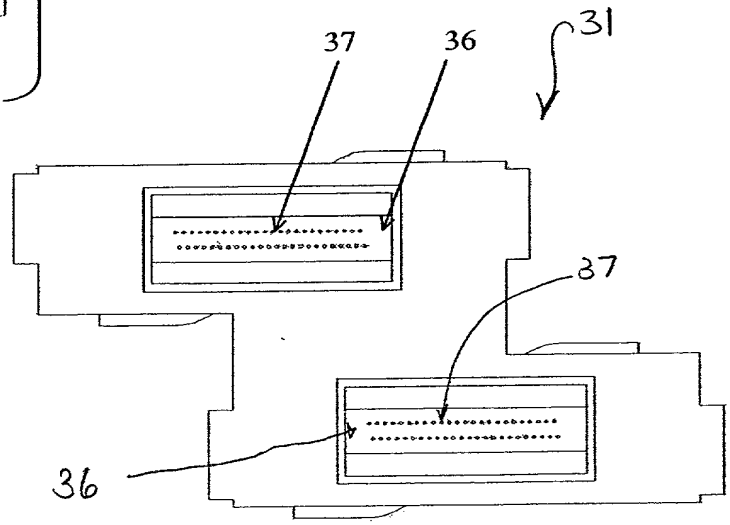


Figure 1C

US 2010/0051529 A1 Mar. 4, 2010

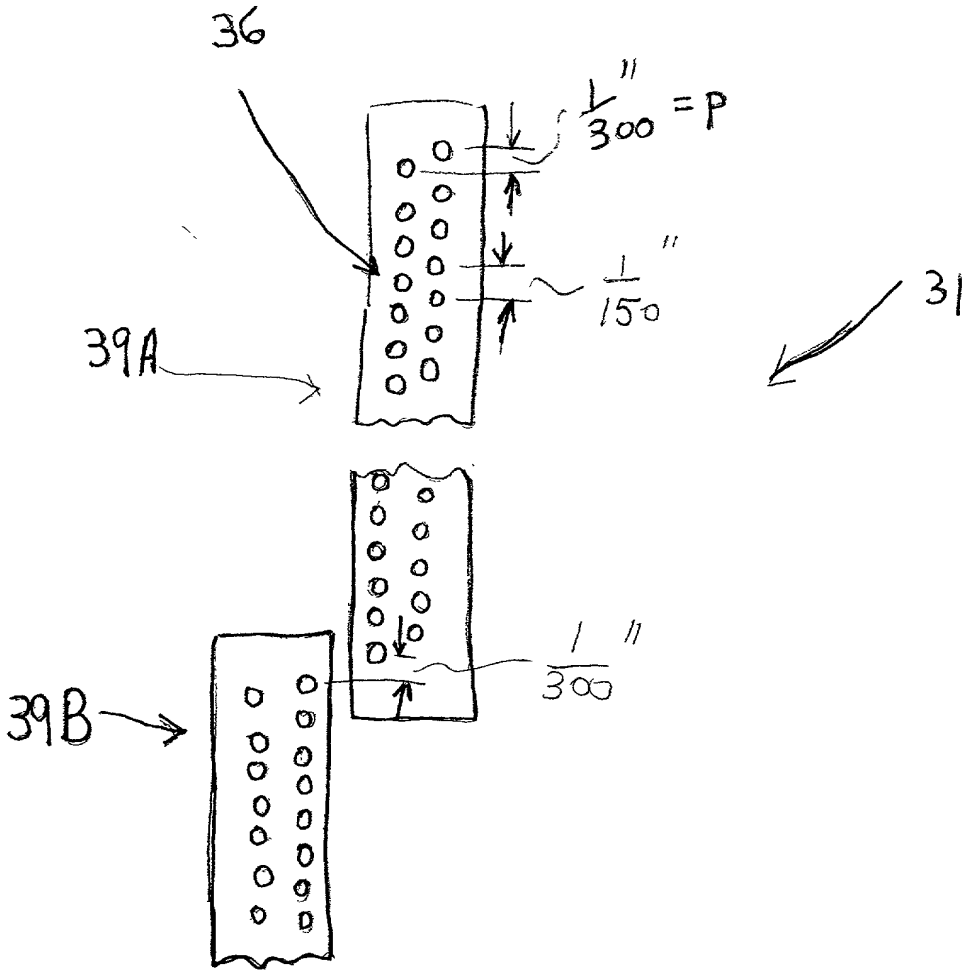


Fig. 2

Tuesday, September 30, 2003

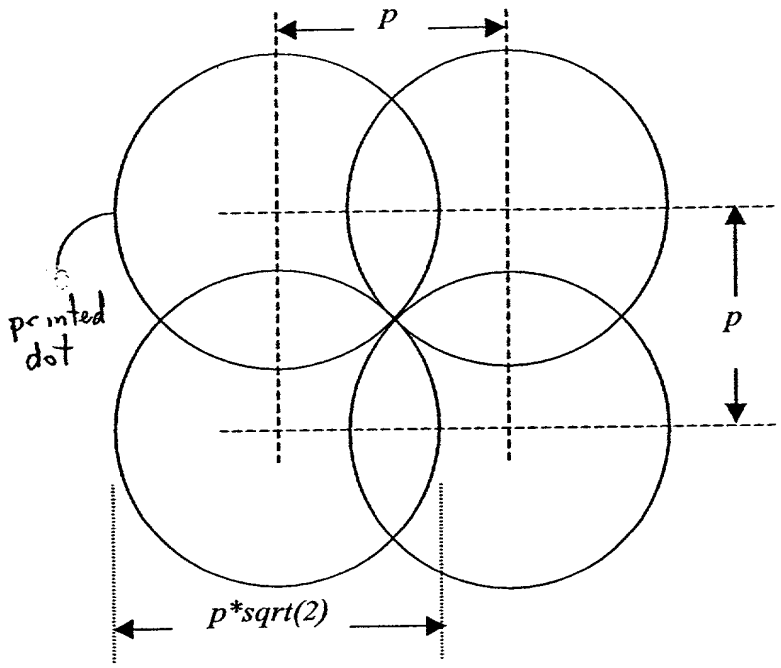


Figure 3

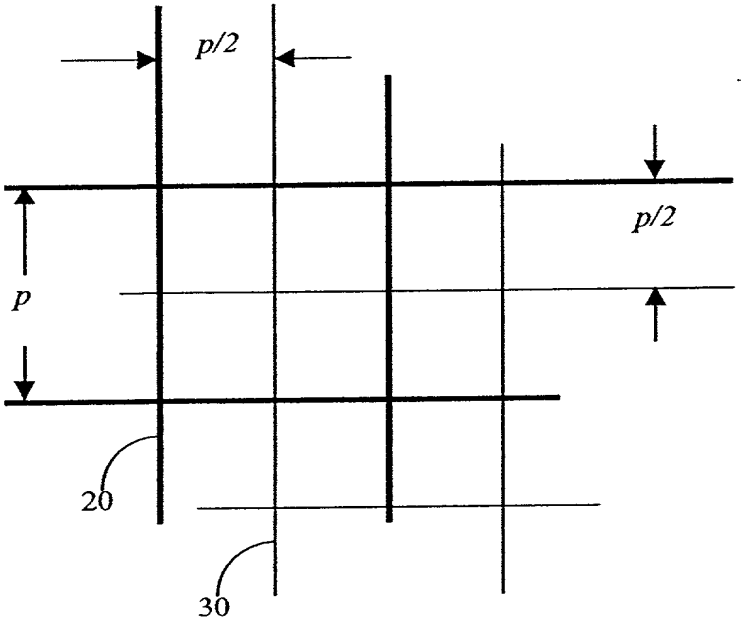


Figure 4

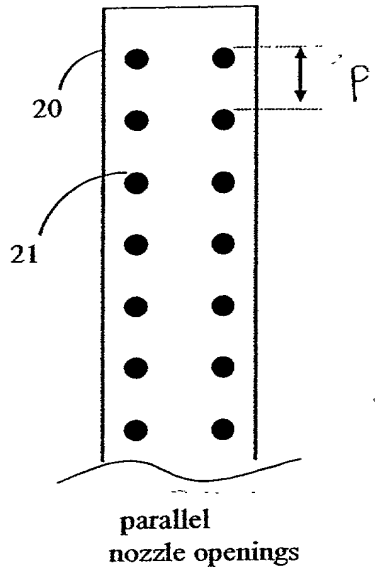

20
21
P
parallel
nozzle openings

FIG. 5

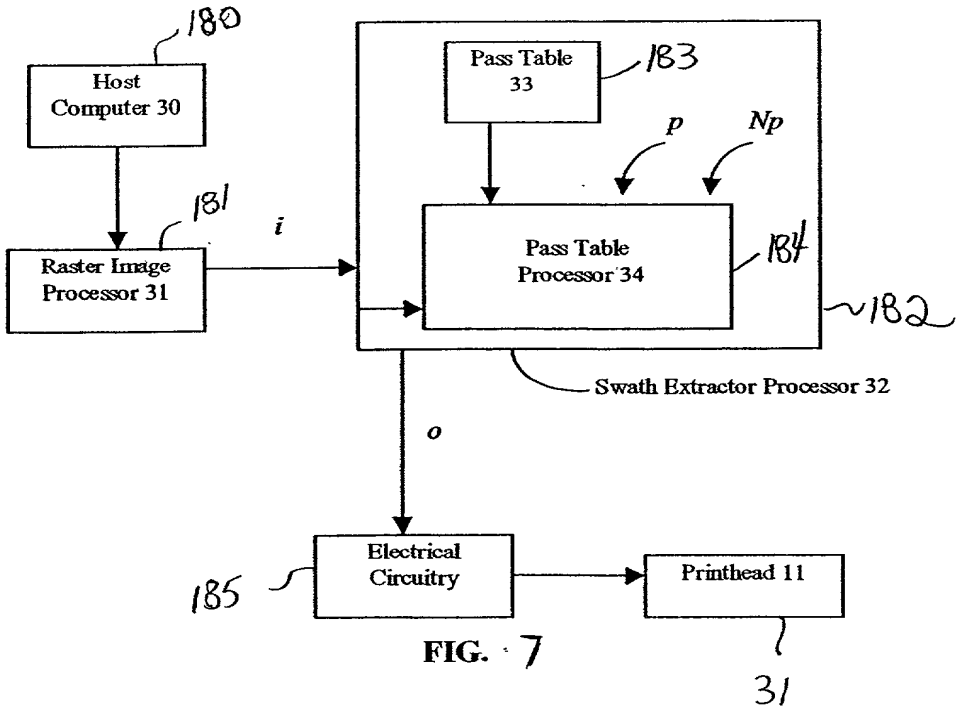

180
Host
Computer 30
181
Raster Image
Processor 31
i
Pass Table
33
183
p
Np
Pass Table
Processor 34
184
182
Swath Extractor Processor 32
o
185
Electrical
Circuitry
Printhead 11
31

FIG. 7

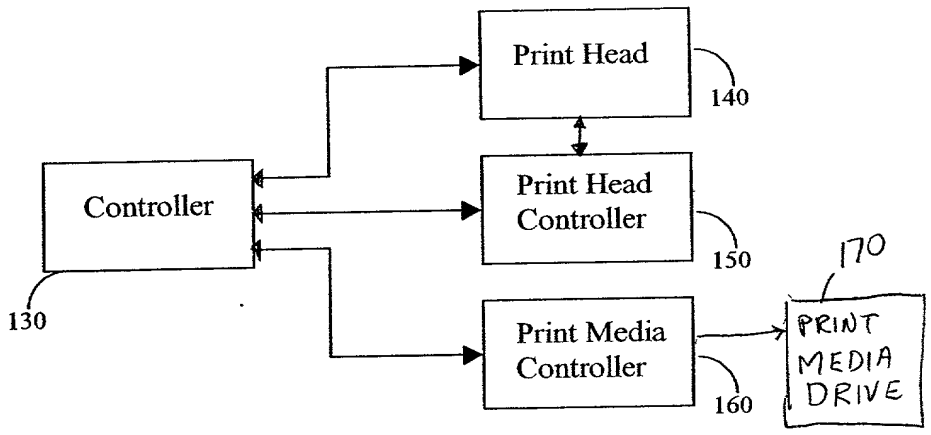
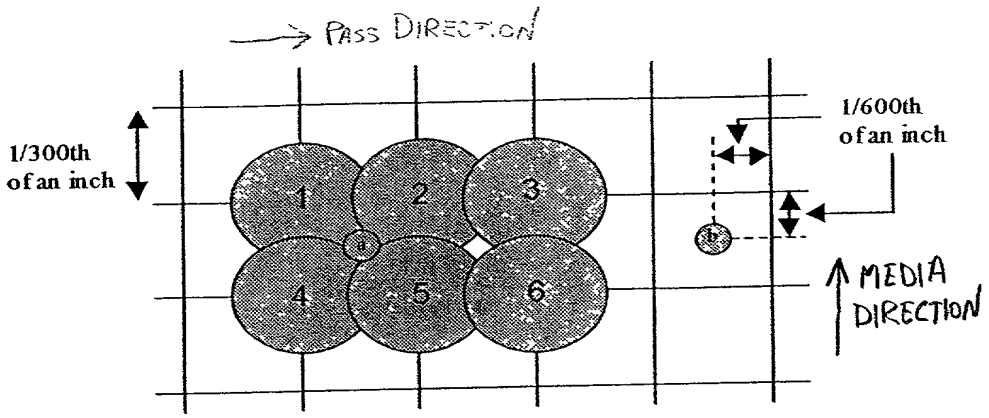

Print Head
140
Controller
Print Head Controller
150
130
170
Print Media Controller
PRINT MEDIA DRIVE
160

Figure 5A



Drops 1 to 6 are on the original raster, drops a & b are on the shifted raster.

Fig. 6

FILED VIA EFS-WEB

Fig 2 of 5 Sep 14 2004 09:56:50

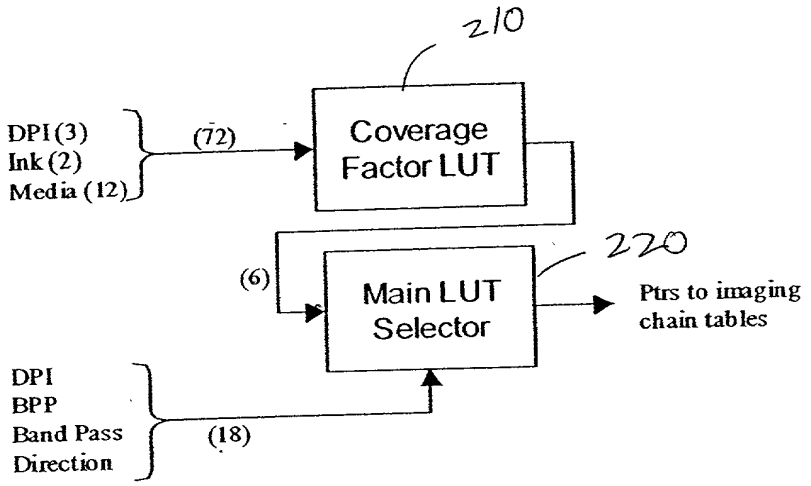


Fig. 8

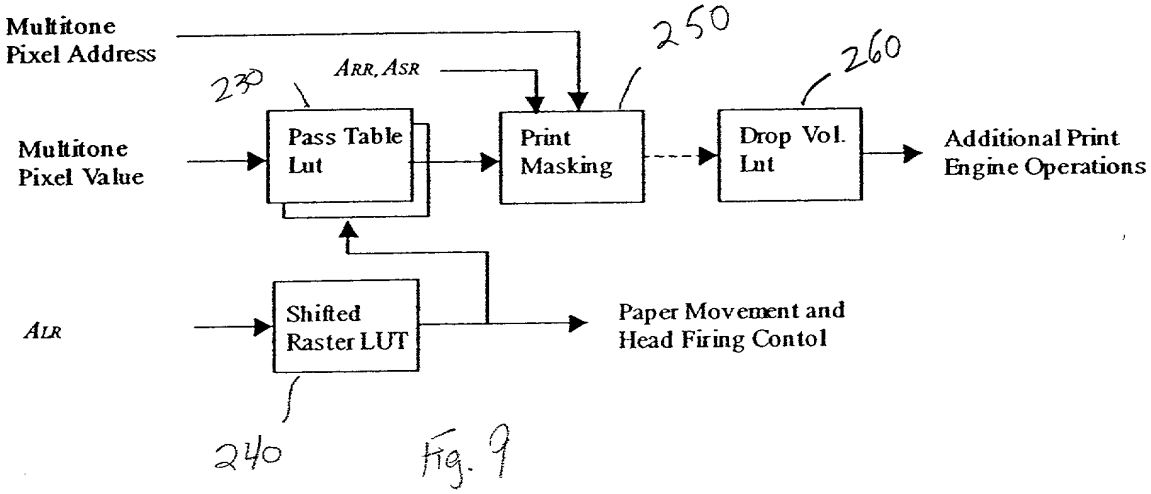

Multitone
Pixel Address
230
ARR, ASR
250
260
Multitone
Pixel Value
Pass Table
Lut
Print
Masking
Drop Vol.
Lut
Additional Print
Engine Operations
ALR
Shifted
Raster LUT
Paper Movement and
Head Firing Contol
240

Fig. 9

300 dpi, 2-bit printing
with 2 banding passes

Reference Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	C
2	E
3	F

Fig. 10(a)

Shifted Raster LUT

Print Pass	Shift Indicator
0	F
1	T
2	F
3	T

Fig. 10(c)

Shifted Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	A
2	A
3	B

Fig. 10(b)

Print Mask

0	1
1	0

Fig. 10(d)

DROP VOLUME LUT

Drop Volume Index	Drop Volume
A	0
B	8 pl
C	16 pl
D	32 pl
E	48 pl
F	64 pl

Fig. 10 (e)

T0/2680 "SC1Dh660

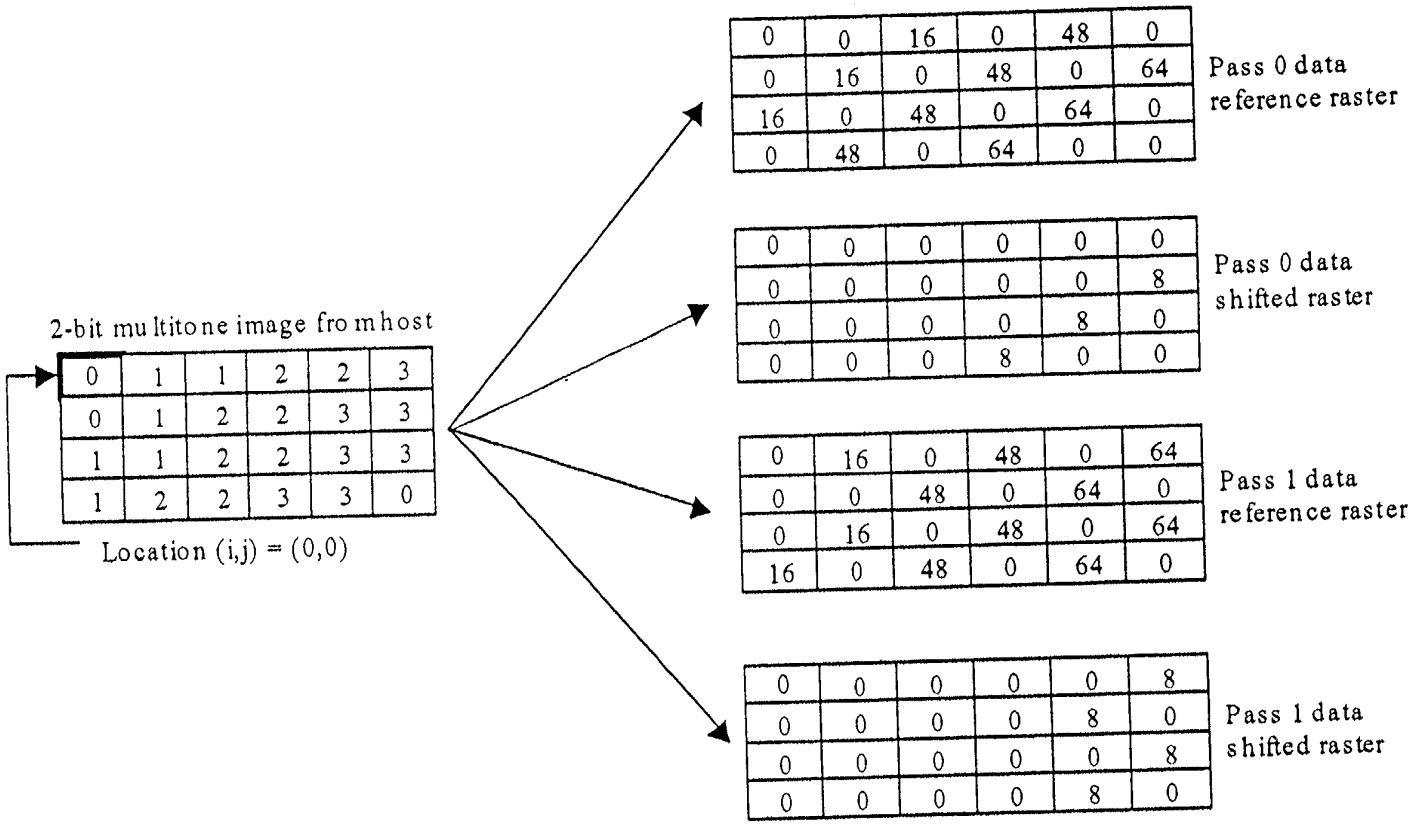


Figure 11

Example Print mode: 300 dpi, 4 bits/pix, 4 banding passes

Ink Volumes: 0,8,16,24,32,40,48,56,64,72,80

Reference Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	B
2	C
3	C
4	D
5	D
6	E
7	E
8	F
9	F
10	F
11	A
12	A
13	A
14	A
15	A

Fig. 12(a)

Shifted Raster LUT

Print Pass	Shift Indicator
0	F
1	T
2	F
3	T
4	F
5	T
6	F
7	T

Fig. 12(c)

Print Mask

0	1	0	1
1	0	1	0
0	1	0	1
1	0	1	0

Fig. 12(d)

Drop Volume LUT

Drop Volume Index	Drop Volume
A	0
B	8 pl
C	16 pl
D	32 pl
E	48 pl
F	64 pl

Fig. 12(e)

Shifted Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	A
2	A
3	B
4	A
5	B
6	A
7	B
8	A
9	B
10	C
11	A
12	A
13	A
14	A
15	A

Fig. 12(b)

Example Print mode: 300 dpi, 4 bits/pix, 2 banding passes

Ink Volumes: 0,8,16,32,48,64,72

Reference Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	B
2	C
3	D
4	E
5	F
6	F
7	A
8	A
9	A
10	A
11	A
12	A
13	A
14	A
15	A

Fig. 13(a)

Shifted Raster LUT

Print Pass	Shift Indicator
0	F
1	T
2	F
3	T

Fig. 13(c)

Print Mask

0	1
1	0

Fig. 13(d)

Drop Volume LUT

Drop Volume Index	Drop Volume
A	0
B	8 pl
C	16 pl
D	32 pl
E	48 pl
F	64 pl

Fig. 13(e)

Shifted Raster Pass Table

Multi-Tone Level	Drop Volume Index
0	A
1	A
2	A
3	A
4	A
5	A
6	B
7	A
8	A
9	A
10	A
11	A
12	A
13	A
14	A
15	A

Fig. 13(b)